



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,180	09/17/2003	Jeffrey Bernard Fortin	131200-1	8789

7590 02/03/2006

General Electric Company
CRD Patent Docket Rm 4A59
Bldg. K-1
P.O. Box 8
Schenectady, NY 12301

EXAMINER

BASICHAS, ALFRED

ART UNIT	PAPER NUMBER
----------	--------------

3749

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,180

Applicant(s)

FORTIN ET AL.

Examiner

Alfred Basichas

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 4-6, 7, 9-14, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Charron (4,770,161) in view of Casey (6,705,533).

a. Charron discloses substantially all of the claimed limitations, including a burner system including, among other things, a gas burner 43, micro-electro-mechanical valves 37,39, and a controller with modulation (see at least col. 5, lines 4-19). Charron does not specifically recite a plurality of burners or a plurality of independently controllable valves in parallel.

b. Casey teaches a burner-valve arrangement including a plurality of burners 15 and a plurality of valves 25 arranged in parallel (see at least fig. 1). Such an arrangement has the clear and obvious benefit of providing for enhanced control of fuel flow and combustion. Casey further teaches a modulator 30 for electronically controlling the valves independently (see at least col. 6, lines 32-48). It should be noted that while Casey may not specifically recite micro-valves it is not unobvious. By definition, valves 25 are electromechanical since they are controlled by electric signals and are mechanical in that they physically restrict gas flow. Casey further recognizes that, at least as regards the thermostat and

algorithms, microelectronic and electromechanical systems are functional equivalents (see at least col. 7, lines 12-23).

c. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the arrangement as taught by Casey into the invention disclosed by Charron, so as to provide for enhanced control of fuel flow and combustion because it is within the general skill of one of ordinary skill in the art to select a known structure on the basis of its suitability for the intended use.

d. It should also be noted that further rationale for the motivation to combine Charron and Casey to provide for a plurality of burners and a plurality of valves, as well as it being unobvious is that it has been held that to provide duplicate parts for multiplied effect is not the type of innovation for which a patent is granted. *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8, 11.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Charron (4,770,161) in view of Casey (6,705,533), which combination obviates substantially all of the claimed limitations. Nevertheless, the combination does not specifically recite the relative position of the valve to the burner. This position is an obvious modification based on design choice, and depends on spatial considerations. The lack of criticality is evidenced by the recitation of both internal and remote locations. In view of the absence of criticality for this particular design, it would have been obvious

to one of ordinary skill in the art at the time of the invention to incorporate it into the invention made obvious by Charron and Casey, so as to provide for spatial considerations.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Charron (4,770,161) in view of Casey (6,705,533), which combination obviates substantially all of the claimed limitations. Nevertheless, the combination does not specifically recite an electronic interface. Official Notice is given that an electronic interface (i.e. thermostat, laptop, pc, palm pilot) is old and well known in the art. Such an arrangement has the clear and obvious benefit of providing for controlling the burner by controlling the amount of gas provided thereto. Being a heater, a wall mounted electronic thermostat would be well within the skill and knowledge of, if not inherent to, a skilled artisan. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a thermostat into the invention made obvious by Charron and Casey, so as to provide for temperature control.

7. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Charron (4,770,161) in view of Casey (6,705,533), which combination obviates substantially all of the claimed limitations. Nevertheless, the combination does not specifically recite the claimed range. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the claimed range into the invention made obvious by Charron in view of Casey, since it has been

held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

8. Claims 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Charron (4,770,161) in view of Casey (6,705,533), which combination obviates substantially all of the claimed limitations. Nevertheless, the combination does not specifically recite the use of the burner system in a cooking appliance. Official Notice is given that cooking appliances including burners with gas valves are old and well known in the art. Such an arrangement has the clear and obvious benefit of providing for controlling the burner by controlling the amount of gas provided thereto and thereby controlling the cooking rate of the culinary item. Furthermore, intended use of a known device is not something for which a patent is granted. Especially in the absence of any structure to facilitated the intended use. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a thermostat into the invention made obvious by Charron and Casey, so as to provide for temperature control.

Response to Arguments

9. Applicants' arguments with regard to the rejected claims, filed December 12, 2005, have been considered, but are not deemed fully persuasive.

- e. With regard to applicant's assertion that Charron does not disclose MEMS, applicant's attention is again directed to Col. 5, lines 14-19.

"Since this amplitude is furthermore related, apart from the current gain of transistor 15, to the value of the current in the base of this same transistor and since this latter is related, through Ohm's law, to the ohmic value of the resistive sensor 40, it will be readily understood that whenever the temperature of the hot water produced approaches the temperature T from which the ohmic value of sensor 40 increases very rapidly, the base current of the transistor also decreases very rapidly, causing the same rapid decrease of the amplitude of the half waves in the mobile coil and, consequently, a decrease just as rapidly of the rate of modulation of the micro-electro valve, which causes a decrease in the differential pressure acting on membrane 33, which finally rises towards seat 32, thus reducing the flow of the gas to the burner 43."

- f. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., gas water heater) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It should further be noted that this recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

- g. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

h. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both references involve gas supply and control.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Basichas whose telephone number is 571 272 4871. The examiner can normally be reached on Monday through Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571 272 4828. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center telephone number is 571 272 3700.

January 30, 2006


Alfred Basichas
Primary Examiner